

## 10/15/15 8:00 AM Senior Design Suite Meeting Minutes

8:05 - Everybody here

8:08 - Robert's research on encoders

- Absolute: multi-line communication, can go back and forth
  - SPN communication
  - Multiple encoders on the same line
  - How to hook it up to the DAQ?
- Incremental
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- Contacting: can be either incremental or absolute
  - cheap, but break easily
- Bourns EMS 22A50 Encoder looks the best, \$35. Exact instantaneous position, reliable

8:13 - Austin's research on weight mechanism

- Electromagnet? How will the weight still being attached to the person affect it
  - most expensive option
- We only need an impulse, maybe a linear actuator motor
- Electric motor on the pulley or down farther
  - Line could be on a spool
- Line needs to go slack on either side

8:17 - Jacquelin's research

- Wire placement is important
- A few ideas, mostly to do with rearranging the

8:20 - Sally

- Solid Aluminum is much cheaper than the hollow tube. Can also use steel
- Need an 8 ft bar
- Current pieces are 1.5"
- We would need to weld the pieces together
- 12 ft of steel was \$55.

8:32 - How are we presenting?

- Maybe have some kind of drawing to show what we want to have
  - Draw frame Sally made, add a circle for the pulley, rotary encoder, weights?
- DAQ - ask about what to do

8:37 - Drawing up idea